

**Work Order ID 50837**

July 30, 2009 12:45:18 PM



Page 1

Item ID: D205-634-041

Accept



Setup Start



Revision ID: D

Stop



Item Name: Replacement Skidtube

Start Date: 08/06/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 08/28/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: *mf* Date: *09 07-30* Tooling:

Date:

Run Start



QC: Date: SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D2580

Rev D

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy D205-634 bluefile &amp; type labels per PPP D205-634-041 CHG002

*N/A*

110

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

*) 119-7-30*

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
Skidtubes	Memo	0.00							
Skidtubes	1- Deburr ends								
	2- C'sink holes as per dwg without cutting fluid								
	3- Prepare tube for welding, remove alodine as required.								
	4- Scribe batch number insied aft end of tube.								
130	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									

11 9-7-30

- 55 9/12/30

TD

φ

W/O:		WORK ORDER CHANGES					
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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140		0.00							



Skidtubes

Skidtubes

Memo

0.00

1-Weld step D2576 as per Dwg. D2580 and QSI 004  
A/R ☐ ☐ Aluminum Rod

M110295

BE 07/07/31

2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI 004.

For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill  
A/R ☐ ☐ Aluminum Rod

M111679/M110295

BE 07/07/31

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64",  
adjust stopper not to hit web. Deburr

5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580.  
Deburr holes

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr

BE 07/08/06

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

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Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

=&gt; 808/08/06

(X)

/

Memo

0.00

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

=&gt; 808/08/06

(X)

/

Memo

0.00

170



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

=&gt; 09-08-07

(X) JH

Memo

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 8:20AM OVEN TEMPERATURE: 320°F FINISH TIME: 8:50AM		1112260	09-08-07					
190 	QC3- Inspect Part Finish	0.00							
QC	Memo	0.00							
Quality Control									

Q.m 09-08-10 (D)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Cust Item ID:

Required Date: 08/28/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates  
A/R ☐ ☐ ☐ Sikaflex-291 ☐ M111557  
Sikaflex expire date: 10/01

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive  
A/R ☐ ☐ ☐ Sikaflex-291 ☐ M111557  
Sikaflex expire date: 10/01

5-Wing Walk as per Dwg D2580 and QSI 005 4.4  
Batch: M112100



MO 09/08/11

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

210

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

2) 508/08/11

②

①

220

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPPD205-634-041  
Location: \_\_\_\_\_  
PPP Rev: \_\_\_\_\_

PPD

31034  
9/8/25

⑩

230

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/08/26

h 9.08.25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

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Page 1

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Work Order ID: 50837



Parent Item: D205-634-041RevD



Parent Item Name: Replacement Skidtube

Start Date: 08/06/2009

Required Date: 08/28/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2580-1RevD		Manufactured	No			110	Each	7.0000	1.0000			



205 Skidtube bent detail

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

7

48616

1

50760

6

B 50758 D m a - 7 - 30

D2576-3RevG

Manufactured No

140

Each

165.0000

1.0000



Step (maching detail)

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

165

43504

62

46661

103

1 BE 9-7-31

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube



Start Date: 08/06/2009

Required Date: 08/28/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2579RevE		Manufactured	No			140	Each	432.0000	20.0000			
												
Crossbolt Spacer												

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST	432	
43988	4	
46434	4	
46956	12	
47797	358	
48272	54	

20 BE 09/07/31

D2855RevA                      Manufactured                      No

200                      Each                      67.0000                      1.0000



Cap

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

FP6	52	
50513	52	

Main Warehouse

ST	15	
10360	2	
35663	7	
41340	1	
42343	3	
42806	2	

X1 MD 09/08/11

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AN3-5A 		Purchased	No			200	Each	2,560.000	2.0000			
Bolt												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

2560

100188

246

105057

2246

15205

68

1 MD 09/08/11

AN960JD10L



Purchased

No

200

Each

6,913.000

2.0000



Washer

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

6913

101291

16

104885

153

105793

236

109632

1508

110985

5000

1 MD 09/08/11

W/O:		WORK ORDER CHANGES					
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ALS7-1032-130		Purchased	No			200	Each	3,706.000	50.0000			



Insert

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

110511

3706

105855

16

108606

52

111529

1638

111779

2000

AN3C4A

Purchased

No

200

Each

2,121.000

50.0000



BOLT

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

2121

112082

121

112314

2000

SO MD 09/08/11

SO MD 09/08/11

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AN960C10L  washer		Purchased	No			200	Each	4,641.000	50.0000			

Warehouse                      Loc Qty                      Loc Code  
Location

OFFSHORE

FG    100

103585    100

Main Warehouse

ST    4541

112116    4541

D3566-13RevC

Manufactured      No



Gasket

200                      Each                      48.0000                      1.0000



50 mp 09/08/11

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST    48

45717    1

46889    5

47435    8

48166    18

50265    16

1 mp 09/08/11

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Shop Packet Print

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D3566-5RevC		Manufactured	No			200	Each	23.0000	1.0000			
												
Gasket												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

23

36113

1

46186

1

47318

1

48167

20

D3566-1RevC

Manufactured No

200

Each

24.0000

2.0000



Gasket

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

24

46349

1

47434

2

48165

10

48557

11

1 m.p. 09/08/11

2 m.p. 09/08/11

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

July 30, 2009 12:45:18 PM

Work Order ID: 50837

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube


Comments:

Start Date: 08/06/2009

Required Date: 08/28/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-11RevD		Manufactured	No			200	Each	31.0000	1.0000			
												
Wearshoe												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

31

45823

1

47432

8

48553

12

50112

10

D3564-13RevD

Manufactured

No

200

Each

56.0000

1.0000



Wearshoe

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP17

35

48554

13

50270

22

Main Warehouse

ST

21

45409

3

46495

10

47867

8

md 09/08/11

md 09/08/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

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July 30, 2009 12:45:18 PM

Work Order ID: 50837

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube



Start Date: 08/06/2009

Required Date: 08/28/2009

Comments:

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D3564-9RevD		Manufactured	No			200	Each	18.0000	1.0000			
												
Wearshoe												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 18

44659 1

45825 1

47316 4

48556 12

D3564-5RevD

Manufactured No

200

Each

23.0000

1.0000



Wearshoe

Warehouse Loc Qty Loc Code

Location

OFFSHORE

FG 2

34806 2

Main Warehouse

FP19 12

48555 12

Main Warehouse

ST 9

45824 1

47433 1

48164 7

1 MD 09/08/11

1 MD 09/08/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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July 30, 2009 12:45:18 PM

• Work Order ID: 50837

Parent Item: D205-634-041RevD

Parent Item Name: Replacement Skidtube


Comments:

Start Date: 08/06/2009

Required Date: 08/28/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2594-3RevC		Manufactured	No			200	Each	918.0000	16.0000			
												
O-Ring, 205 Skidtube												

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST                                      918

27168                                  44

29908                                  874

D2594-1RevC

Manufactured      No

200

Each

716.0000

16.0000



Plug, 205 Skidtube

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST                                      716

42221                                  16

42807                                  92

43884                                  103

46435                                  3

47251                                  502

16 mo 09/08/11

16 mo 09/08/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





DESIGN <i>[Signature]</i>	DRAWN BY <i>RH</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

RELEASED  
07-06-28 *[Signature]*

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

*Handwritten:*  
#50837  
10-10-20

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

RELEASED  
07-06-28

Diagram illustrating the grinding locations for the propeller cross-section:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- LOCATION RIDGE ON UNDERSIDE OF D2576

D2579 SPACER  
 D2596 WEB (REF)  
 ALS7-1032-130 (REF)  
 (TYP 50 PLACES)

AFTER DRILLING AND BENDING ASSEMBLY  
 PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C/BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

[illegible]

Figure 1: Typical cross-section of a road with a 4% grade. The diagram shows a road profile with a 4% upward slope. Key dimensions include a 1.4m vertical offset at the start, a 1.0m distance between the hole and the tangent point, a 13.4m horizontal distance from the start to the hole, a 20.0m horizontal distance from the hole to the tangent point, a 32.0 ± 1.0m horizontal distance from the tangent point to the end, and a 1.1m vertical offset at the end. A hole with a diameter of Ø0.640 is shown at the tangent point.

0.5 1.5 1.5 1.5

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

WELD AS PER DETAIL B

8

P P P P P P P

REFER TO DETAIL C

D3566-1 D3566-5 D3566-13

D3564-11 D3564-5 D3564-9 D3564-13

AN3C4A BOLT (1)  
AN960C10L WASHER (1)  
(50 PLACES)

DESIGN J.J. DRAWN BY

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DART AEROSPACE LTD.

<b>DART</b>		<b>DART AEROSPACE LTD.</b> HAMPSHIRE, ONTARIO, CANADA	
DRAWING NO. D2580		REV. D SHEET 2 OF 3	
TITLE 205 SKIDTUBE ASSEMBLY		SCALE 1:24	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QG Inspector

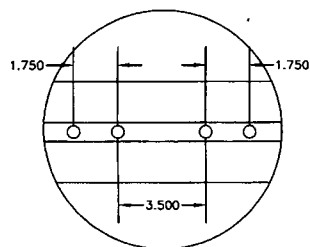
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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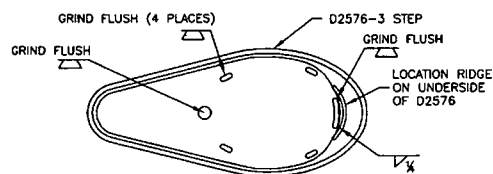
**NOTE:** Date & initial all entries

**DETAIL E**  
SCALE 5:24

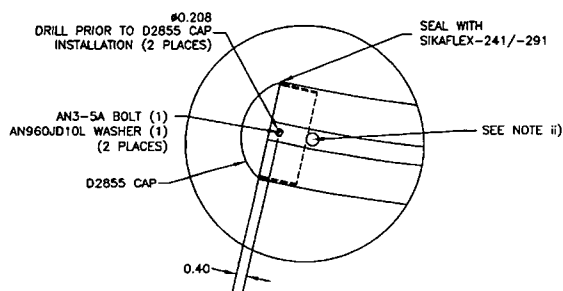


**RELEASED**  
07.06.28

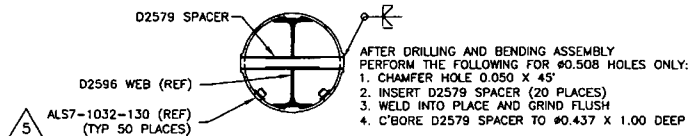
**DETAIL F**  
SCALE 5:24



**DETAIL G**  
SCALE 5:24

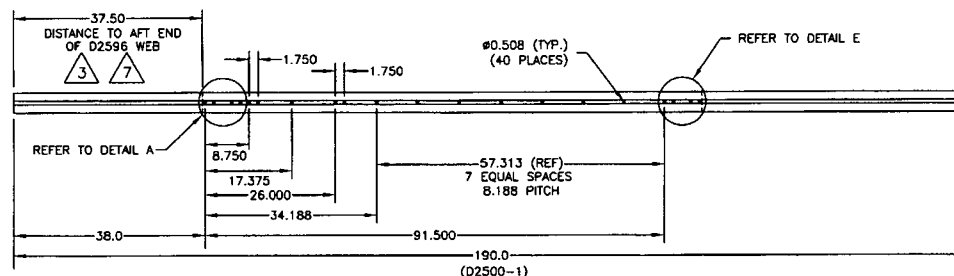


**SECTION H-H**  
SCALE 5:24

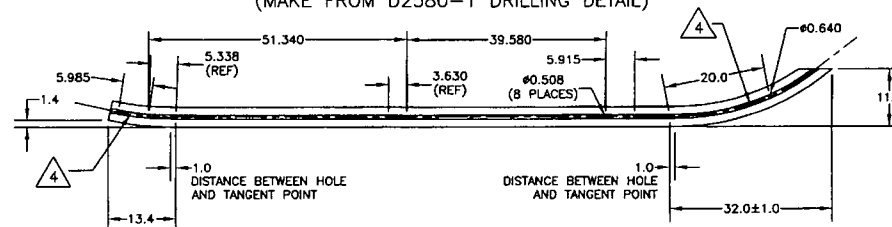


AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:  
1. CHAMFER HOLE 0.050 X 45°  
2. INSERT D2579 SPACER (20 PLACES)  
3. WELD INTO PLACE AND GRIND FLUSH  
4. C'BORE D2579 SPACER TO #0.437 X 1.00 DEEP

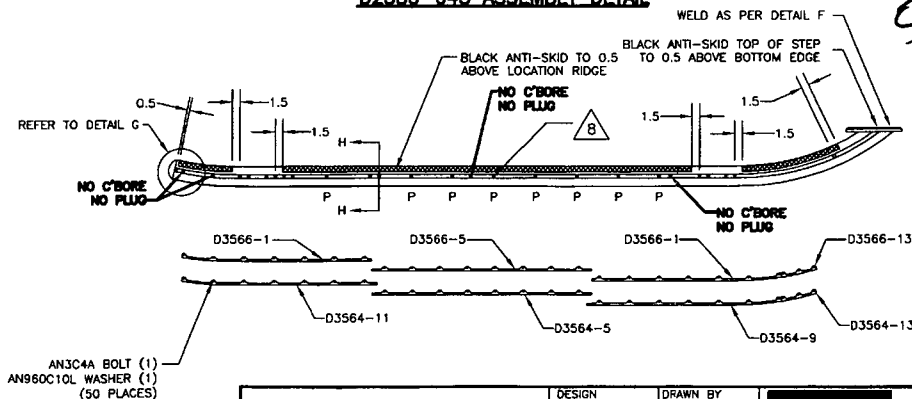
**D2580-1 DRILLING DETAIL**



**D2580-5 BENDING AND CUTTING DETAIL**  
(MAKE FROM D2580-1 DRILLING DETAIL)



**D2580-045 ASSEMBLY DETAIL**



**D2580-045 NOTES**

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

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DESIGN RH	DRAWN BY RH	<b>DART</b> DART AEROSPACE LTD. WILMINGTON, ONTARIO, CANADA	REV. 0
CHECKED H	APPROVED H	DRAWING NO. D2580	SHEET 3 OF 3
DATE 07.02.27	TITLE 205 SKIDTUBE ASSEMBLY	SCALE 1:24	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

NO. 205

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: D205 634 041 50835  
Part number: D205 634 041  
Description: 205 skid tube  
Welding Process: Tig ☒ Mig ☐  
Base material: Aluminium  
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐  
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐  
Undercut: pass ☒ fail ☐  
Pin holes: pass ☒ fail ☐  
Overlap (cold lap): pass ☒ fail ☐  
Porosity (surface): pass ☒ fail ☐  
Coloration: pass ☒ fail ☐

Qualifier P.C. M.H. Date of Test Coupon 09.07.30

Welder Barclay Elliott Date of Test Coupon 09.07.30

The above named individual is qualified in accordance with AWS D17.1.2001 to weld